



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Frank O'Bannon
Governor

Lori F. Kaplan
Commissioner

August 27, 2003

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

TO: Interested Parties / Applicant

RE: Arch Wood Protection, Inc. / 127-16633-00066

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Registration

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 4-21.5-3-4(d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, ISTA Building, 150 W. Market Street, Suite 618, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FN-REGIS.dot 8/11/03

August 27, 2003

Mr. Ken Cogan
Arch Wood Protection, Inc.
1579 Koppers Road
Conley, Georgia 30288

Dear Mr. Cogan:

Re: Registration Operation Status,
127-16633-00066

The application from Arch Wood Protection, Inc., received on October 3, 2002, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following plant that produces wood preservatives at a maximum potential rate of 275,730,000 pounds per year, which involves mixing and compounding of chemicals located at 2852 Raystone Drive, Valparaiso, Indiana 46383, is classified as registered:

- (a) Three (3) Pack A Storage Tanks, identified as Tank 202, Tank 203 and Tank 204. Tank 202 has a capacity of 11,749 gallons; Tank 203 has a capacity of 13,535 gallons and Tank 204 has a capacity of 15,227 gallons.
- (b) One (1) Pack B Storage Tank, identified as Tank 201 with a capacity of 8,565 gallons.
- (c) Two (2) MEA Storage Tanks, identified as Tanks 101 and Tank 102 each with a capacity of 15,227 gallons.
- (d) Two (2) Pack A Reactors, identified as RA1 and RA2 with a capacity of 5,000 gallons each.

The acid mist emission from the reactors is voluntarily controlled by venturi scrubber.

The following conditions shall be applicable:

(1) Opacity Limitations [326 IAC 5-1-2]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

(2) Particulate Emissions from Process Operations [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the PM (acid mist overspray) emissions from the two (2) Reactors, RA1, and RA2 shall each be limited to 16.3 pounds per hour at 15,738 pounds per hour process weight. The PM limit shall be determined using the following equation:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished using below equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

(3) New Source Performance Standards (NSPS) [326 IAC 12 and 40 CFR § 60, Subpart Kb] and [326 IAC 8-9]

- (a) Pursuant to Part 60.116, section (b) of this NSPS, the owner or operator of the two (2) MEA storage Tanks #1 and #2 with a capacity of 15,227 gallons each; and three (3) Pack A Storage Tanks with capacities of 13,535 gallons, 11,749 gallons, and 15,227 gallons shall keep readily accessible records showing the dimension of these storage tanks and an analysis showing the capacity of each storage tank.
- (b) Pursuant to Part 60.116b section (a) of this NSPS, the owner or operator of the two (2) MEA storage Tanks #1 and #2 with a capacity of 15,227 gallons each; and three (3) Pack A Storage Tanks with capacities of 13,535 gallons, 11,749 gallons and 15,227 gallons shall keep copies of the records required in section (a) of this condition for the life of the tanks.

(4) Volatile Organic Liquid Storage Vessels [326 IAC 8-9]

Pursuant to 326 IAC 8-9, the owner or operator one (1) Pack B Storage Tank with a capacity of 8,565 gallons shall maintain a record and submit to the department a report containing the following information of the vessel:

- (a) The vessel identification number.
- (b) The vessel dimensions.
- (c) The vessel capacity.

This existing exempted source is being reclassified as a registered source.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

**Compliance Data Section
Office of Air Quality
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015**

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

APD

cc: File - Porter County
Porter County Health Department
Air Compliance - Rick Massoels
Northwest Regional Office
Permit Tracking
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Ampil

Registration Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3).

Company Name:	ArchWood Protection, Inc.
Address:	2852 Raystone Drive
City:	Valparaiso
Authorized individual:	Ken Cogan
Phone #:	(404) 363-6300 extension (6003)
Registration #:	127-16633-00066

I hereby certify that ArchWood Protection, Inc. is still in operation and is in compliance with the requirements of Registration 127-16633-00066.

Name (typed):
Title:
Signature:
Date:

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name: Arch Wood Protection, Inc.
Source Location: 2852 Raystone Drive, Valparaiso, Indiana 46383
County: Porter
SIC Code: 2879
Registration No.: 127-16633-00066
Permit Reviewer: Aida De Guzman

The Office of Air Quality (OAQ) has reviewed an application from Arch Wood Protection, Inc. relating to the operation of the following emission units used in the production of wood preservatives at a maximum potential rate of 275,730,000 pounds per year, which involves mixing and compounding of chemicals:

- (a) Three (3) Pack A Storage Tanks, identified as Tank 202, Tank 203 and Tank 204. Tank 202 has a capacity of 11,749 gallons; Tank 203 has a capacity of 13,535 gallons and Tank 204 has a capacity of 15,227 gallons.
- (b) One (1) Pack B Storage Tank, identified as Tank 201 with a capacity of 8,565 gallons.
- (c) Two (2) MEA Storage Tanks, identified as Tanks 101 and Tank 102 each with a capacity of 15,227 gallons.
- (d) Two (2) Pack A Reactors, identified as RA1 and RA2 with a capacity of 5,000 gallons each.

The acid mist emission from the reactors is voluntarily controlled by venturi scrubber.

Existing Approvals

The source has been operating under an Exemption status issued on July 8, 1981.

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on October 3, 2002, with additional information received on October 15, 2002; July 16, 2003 and July 17, 2003.

Emission Calculations

- (a) Wood Preservative Production: See Page 1 through 13, TSD Appendix A of this document for detailed emissions calculations.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	5.098
PM-10	5.098
SO ₂	0.0
VOC	1.486
CO	0.0
NO _x	0.0

HAP's	Potential To Emit (tons/year)
Nickel	0.0014
Lead	0.0014
TOTAL	0.003

Justification of Approval Level

- (a) The existing source's potential to emit (as defined in 326 IAC 2-7-1(29)) of Particulate Matter or Particulate Matter Less than Ten Microns are greater than 5 tons per year but less than 25 tons per year. Therefore, the source is subject to 326 IAC 2-5.5, registration.

Actual Emissions

No previous emission data has been received from the source.

County Attainment Status

The source is located in Porter County.

Pollutant	Status
PM-10	Unclassifiable
SO ₂	Unclassifiable
NO ₂	Attainment
Ozone	Attainment
CO	Attainment
Lead	not determined

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Porter County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Porter County has been classified as attainment or unclassifiable for all the other criteria

pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing re-permitted source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	0.51
PM10	0.51
SO ₂	0.0
VOC	1.486
CO	0.0
NO _x	0.0

The source voluntarily controlled the acid mist emission from the reactors using venturi scrubber (80% overall efficiency).

- (a) This existing re-permitted source is **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

Part 70 Permit Determination

- (a) 326 IAC 2-7 (Part 70 Permit Program)
This existing source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:
- (1) each criteria pollutant is less than 100 tons per year,
 - (2) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
 - (3) any combination of HAPs is less than 25 tons/year.

The existing exempted status of this source is being reclassified into a registration.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

- (1) 40 CFR Part 60.110b, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Storage Vessels) for which construction, reconstruction, or modification commenced after July 23, 1984 for storage tanks with capacities greater than or equal to 10,567 gallons.

Part 60.116b section (b) of this NSPS requires the owner or operator of the two (2) MEA storage Tanks #1 and #2 with a capacity of 15227 gallons each; and three (3) Pack A Storage Tanks with capacities of 13535 gallons, 11749 gallons and 15227 gallons to keep readily accessible records showing the dimension of the storage tanks and an analysis showing the capacity of the storage tanks.

Part 60.116b section (a) of this NSPS requires the owner or operator of the two (2) MEA storage Tanks #1 and #2 with a capacity of 15227 gallons each; and three (3) Pack A Storage Tanks with capacities of 13535 gallons, 11749 gallons and 15227 gallons to keep copies of the records required in section (b) for the life of the tanks.

- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

- (a) 326 IAC 2-6 (Emission Reporting)
This source is located in Porter County and the potential to emit VOC is less than ten (10) tons per year. Therefore, 326 IAC 2-6 does not apply.
- (a) 326 IAC 5-1 (Visible Emissions Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:
- (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

- (a) 326 IAC 8-1-6 (General Reduction Requirements)
This rule is applicable to new facilities as of January 1, 1980 with potential VOC emissions of 25 tons per year or greater. The source is not subject to this rule since its potential VOC is less than 25 tons per year.
- (b) 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)
On and after October 1, 1995, this rule applies to storage vessels used to store volatile organic liquid (VOL) that are located in Clark, Floyd, Lake or Porter County with capacities less than or greater than 39,000 gallons.
- (1) The one (1) Pack B Storage Tank with a capacity of 8,565 gallons is subject to the following reporting and recordkeeping requirements of section (6)(a) and (6)(b) and exempt from all the other requirements of this rule:
- (A) The owner or operator of each vessel to which section 1 of this rule applies shall maintain a record and submit to the department a report containing the following information for each vessel:
- (i) The vessel identification number.
- (ii) The vessel dimensions.
- (iii) The vessel capacity.
- (2) The two (2) MEA storage Tanks #1 and #2 with a capacity of 15,227 gallons each; and three (3) Pack A Storage Tanks with capacities of 13,535 gallons, 11,749 gallons and 15,227 gallons are exempted from 326 IAC 8-9, as they are subject to 40 CFR 60, Subpart Kb, New Source Performance Standards for VOL Storage Tanks.
- (c) There are no other 326 IAC 8 rules that applies to this existing source.
- (d) 326 IAC 6-3-2 (Process Operations)
This rule mandates PM (acid mist overspray) emissions from the two (2) Reactors, RA1, and RA2 using the following equation:

$$\begin{aligned}\text{Process wt. for each reactor} &= 275,730,000 \text{ lbs/yr} * \text{yr}/8760 \text{ hrs} / 2 \text{ reactors} \\ &= 15738 \text{ lbs/hr} * \text{ton} / 2000 \text{ lbs} \\ &= 7.86 \text{ tons/hr}\end{aligned}$$

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

$$\begin{aligned}E &= 4.10 (7.86 \text{ tons/hr})^{0.67} \\ &= 16.3 \text{ lbs/hr each reactor}\end{aligned}$$

Each reactor is in compliance with 326 IAC 6-3, since each PM emission is less than what is allowed in the rule.

Conclusion

The operation of this wood preservative production plant shall be subject to the conditions of the attached **Registration 127-16633-00066**.

SUMMARY OF EMISSIONS

Source	Description	VOC	PM/PM10	Copper	Iron	Nickel *	Lead *	Zinc
		Max (tons/yr)	Max (ton/yr)	Max (ton/yr)	Max (ton/yr)	Max (ton/yr)	Max (ton/yr)	Max (ton/yr)
Process (CA-B)		0.490						
Process (CBA-A)		0.430						
Worst Process Case Uncontrolled Emissions		0.490	2.549	2.500	0.004	1.400E-03	1.400E-03	0.009
Worst Process Case Controlled Emissions		0.490	0.510	0.500	0.001	0.000	0.000	0.002
	MEA Tank #1	1.800E-03						
	MEA Tank #2	1.800E-03						
	Pack A Tank #1	1.800E-03						
	Pack A Tank #2	9.400E-04						
	Pack A Tank #3	9.400E-04						
	Pack B Tank	9.400E-04						
	Fugitives	0.988	2.549	2.500E+00	4.000E-03	1.400E-03	1.400E-03	9.000E-03
Facility Total Uncontrolled (tons/year)		1.486	5.098	5.000	0.008	0.003	0.003	0.018
Facility Total Controlled (tons/year)		1.486	0.510					
Worst Single HAP Uncontrolled (tons/year)			0.001					
Total Combined HAPs Uncontrolled(tons/year)			0.003					
Total Worst Single HAPControlled (tons/year)			0.000					
Total Combined HAPs Controlled(tons/year)			0.000					

Notes:

Potential hours of operation is 8760.

Actual hours of operation is 4160 (16 hours/day, 5 days/week, 52 weeks/year).

Fugitive emissions from unloading/loading activities were assumed to be equal to process mixing emissions.

Tank emissions were calculated using EPA's Tanks 4.0 program.

HAPs (Metals) is controlled by a scrubber w/ 80% removal efficiency.

* - only HAPs included under the 187 regulated HAPs